



17 JUNE 2021



Operational Strategy 2021-2023

Contents

- 1 Background and Purpose 3
 - 1.1 Background..... 3
 - 1.2 Vision and Mission..... 3
 - 1.3 What the WaterCentre@KTH offers 4
- 2 Organisation of the Centre..... 4
 - 2.1 Structure..... 4
 - 2.2 Partners and Networks..... 5
 - 2.3 Relevant Research Infrastructures 6
 - 2.4 Relation to Education activities..... 7
- 3 Operational aspects 7
 - 3.1 Communicate 8
 - 3.2 Connect 8
 - 3.3 Campaign..... 9

1 Background and Purpose

1.1 Background

The WaterCentre@KTH was established in 2017 through a decision from the KTH President. KTH centres are created to facilitate interdisciplinary collaboration and cooperation with societal partners. The WaterCentre is hosted by the ABE-school but operates across and involves all five schools at KTH. An evaluation was made at the end of the first 4-year period of operation, which formed the basis of a decision to prolong the mandate of the Centre for another 3 years.

Key results during 2017-2020 include starting up 15 new collaboration and research projects together with partners, with a total external funding of 176 MSEK¹. In 2020, the WaterCentre directly involved 22 staff at KTH (about 8 full time equivalents, with 50% being men and 50% women). Other important achievements include arranging close to 40 events and increasing the communication around water at KTH. It also resulted in strengthened partnership with Stockholm City and a new formal partnership collaboration with Värmdö municipality, as well as high-profile research around COVID-19 surveillance in wastewater. For a more detailed account and analysis see separate Evaluation Report of the WaterCentre@KTH, and the public [Report for 2017-2020](#).

1.2 Vision and Mission

The Vision (long-term objective) of the centre is:

A globally competitive research and innovation environment that generates applicable and viable solutions to some of the challenges of sustainable and equitable use of water faced by humankind in the 21st century.

Our Mission is to:

- I. Communicate results, methods, and new approaches broadly in the water arena in order to raise awareness within KTH and in society at large*
- II. Facilitate cross-disciplinary collaboration within KTH and with industry partners, other knowledge institutions, and public agencies*
- III. Mobilise funding for research and innovation projects in interdisciplinary teams that can move new ideas and recombined knowledge to more applied stages and products*

The Vision remains from the inception of the Centre while the Mission statement has been slightly revised and adjusted for the current period (2021-23). The Mission is operationalised in annual Work Plans and Budget, followed up through Annual Reports submitted to the Centre Board.

¹ In addition to the 14 projects reported in the Report for 2017-2020, also the Formas BlueFood of 48 MSEK granted late in 2020 is included here. The BlueFood is a flagship of the marine cluster in the WaterCentre@KTH

1.3 What the WaterCentre@KTH offers

A natural entry point for information: we offer a space for easy exchange of information on water-related activities and knowledge advancement between KTH teachers and researchers, professional communities and organisations outside academia, and the general public. We want to be the natural entry point for anyone who is curious about water research and innovation at KTH.

We help people connect: the WaterCentre@KTH offers to assist partners in industry, public administration and civil society to find the relevant expertise at KTH, and vice versa. Based on ideas and initiatives from partners and researchers, we connect people to jointly explore potential collaboration in intra- or interdisciplinary meetings, depending on the challenge.

We campaign for projects: we offer an upstream model to develop strong interdisciplinary teams around relevant water challenges, where we also see financing opportunities in the near future. We work pro-actively through “Campaigns” with one or two selected themes at a time. Here, we invite partners and researchers across KTH to contribute, participate and develop strong coalitions around innovative responses to pressing challenges. We believe that good ideas will always find finance. *Don't wait for the call. Be the call.*

2 Organisation of the Centre

2.1 Structure

The Host is the ABE school where the Centre holds a specific economic identity (similar to a division), although it operates across all KTH schools. The WaterCentre belongs administratively to the Department of Sustainable Engineering, Environment and Development (SEED). The Head of ABE School approves the overall organisational arrangement and is consulted on questions regarding the Board composition.

The Board oversees the operations, approves annual budget and gives strategic guidance. The Board advises the Director on fund mobilisation strategies and on allocation of non-earmarked contributions to the Centre. The Board convenes at least three times per year, according to the following schedule. Annual budgets and work plans are approved during a meeting around October to November, while annual reports are discussed at a meeting in the period March to April. Just before or after the summer break, the Board meets to discuss more long-term strategic issues.

For the current period the number of Board Members are proposed to be expanded to nine which should include four seats for key external partners, plus one for each of the five KTH schools. The Chairperson shall belong to the Host school and possess a casting vote. Partner organisations proposed to be included in the Board for 2021-2023 are Stockholm Stad, IVL, SEI and [Vattenindustrin](#) (earlier VARIM).

The Director reports to the Board and leads the Centre work. David Nilsson, associate professor in History of Science, Technology and the Environment, is Director since 2017 on part time. The Director has operational and economic responsibility and has certain signatory powers by means of

delegation from head of school and head of department. The Director also has important functions as spokesperson in partner dialogue and to connect the various scientific disciplines and relevant competencies at KTH.

An Administrative Coordinator, Lisa-Mi Swartz, assists the Director and carries out much of the operational duties (part time position). These including communication and website management, contract management, liaison with partners, event coordination and regular administrative work such as procurement, bookings etc.

Cluster Leaders are leading researchers at KTH who promote and coordinate important thematic areas on behalf of the WaterCentre@KTH. The Cluster Leader is not financially compensated by the Centre but represents an in-kind contribution of the involved scientists and/or their schools to the WaterCentre@KTH. The Centre has currently appointed five Cluster Leaders in the thematic areas of Digitalisation (Carlo Fischione and Viktoria Fodor, EECS school); Decentralised technologies (Joydeep Dutta, SCI); Circular water (Zeynep Cetecioglu Gurol, CBH), and Marine environments (Fredrik Gröndahl, ABE).

Projects. All research and collaboration activities associated with the Centre are carried out in project form. Separate funding and collaboration agreements are put in place for external partners as well as internally between the participating schools. During 2017-2020 in total 14 projects has started connected to the WaterCentre, covering all the five schools at KTH. Projects can be hosted either by the WaterCentre (under ABE/SEED), or in the Department of the designated project leader. One key raison d'être of Centre formations at KTH is to facilitate collaboration between departments and schools. Interdisciplinary research is in focus for the WaterCentre@KTH and therefore we strive to catalyse and attract external funding for projects that involve more than one school at KTH.

2.2 Partners and Networks

In addition to connecting water researchers in different fields at KTH, the WaterCentre@KTH adds value by facilitating collaboration with other organisations, and in particular; societal partners outside academia. The following organisations, all with which KTH has various kinds of formal partnership arrangements, are especially relevant for the WaterCentre@KTH:

- Stockholm Stad (including utility companies like SVOA, Sthlm Exergi, Familjebostäder, and the holding company Stockholm Stadshus AB)
- IVL Svenska Miljöinstitutet
- Stockholm Environment Institute, SEI
- Värmdö kommun
- RISE, Research Institutes of Sweden
- Stockholms Universitet
- Region Stockholm

Important networks where KTH is member:

- Mälardalsklustret (network within Svenskt Vatten focusing on wastewater treatment)

- Svenska Näringsplattformen (network on phosphorous reuse, coordinated by RISE and IVL)
- WaterShare platform (network for sharing and marketing products and water innovations coordinated by KWR in Netherlands)

During 2017-2020 the only partner organisation with formal Board representation in WaterCentre@KTH has been Stockholm stad, through a designated person from SVOA. The current phase will include three partner organisations in the Board.

The list above is not in any way exhaustive. Through the WaterCentre activities and projects we collaborate with dozens of other organisations. An important task for the coming period is to develop a more structured type of dialogue with societal partners. The experience of the “Regional Partnerdialog för FOU inom VA” carried out during 2020 (a series of bilateral talks and joint workshops involving 15 WSS organisations) clearly pointed to a demand for a more structured dialogue around topics of common interest with KTH in the area of water.

We plan to organise Partner Dialogue with a wide range of stakeholders at an annually recurring event, in addition to individual ad-hoc and project-related meetings (see below).

2.3 Relevant Research Infrastructures

The WaterCentre@KTH does not possess or dispose of any facilities, premises or research infrastructure. Nevertheless, research infrastructures are important assets. Successful international centres for water research and innovation, like EAWAG in Switzerland and WETSUS in Netherlands, build their strength around dedicated water research infrastructures. The WaterCentre can thus promote and mobilise relevant research infrastructures of KTH (and sometimes, those of partners) in its collaborative efforts. The following research infrastructures are of particular relevance:

- Hammarby Sjöstadsverk, HSV, is currently co-owned with IVL. The current facility will be decommissioned during 2022. The premise lease agreement expires with SVOA by 31 Dec 2021, and IVL is planning relocate and invest in a new facility. The possibility for KTH to access the facility under a partnership arrangement will be further explored with IVL.
- KTH Laboratories at main campus and AlbaNova (Biotechnology and Nanotechnology labs at AlbaNova, Chemical Engineering Dept lab at Teknikringen 42 and SEED lab at Teknikringen 72)
- SciLifeLab, Solna. National research infrastructure for life sciences research. Shared with KI, SU, Uppsala University and Region Stockholm.
- Kristineberg Marine research and development Station. Hosted by Gothenburg University, jointly operated by IVL, KTH, CTH. This research facility is considered a key resource for the successful and expansive development of KTH marine research.
- Storsudret testbeds, Gotland. Testbed facility for water management, operated by IVL.
- Djurö marine field station, Värmdö. Established in 2021 through an agreement with Värmdö municipality to use the old wastewater plant site for marine robotics tests and field courses.

- Electrum labs at Kista Campus (electronics, nanostructure, physics, etc)

All of these infrastructures have already been mobilised in water-related research and education, by individual research groups or through WaterCentre@KTH initiatives. However, there is need for a more concerted and coordinated effort centrally at KTH for ensuring effective and optimal utilisation of KTH infrastructure. The WaterCentre@KTH would welcome a review of how research infrastructure is owned, managed and mobilised at KTH. In particular, there is potential to better mobilise KTH researchers to get involved at the current and future HSV facility. To achieve this the WaterCentre@KTH strives for a closer coordination with the management of HSV.

2.4 Relation to Education activities

In relation to (under)graduate education we will give priority to:

- Facilitating for partners to find students to do thesis projects (MSc or BSc theses) and also to involve thesis students in projects coordinated by the Centre
- Dialogue with partners about competence needs and water education at KTH

Centres at KTH are not supposed to directly carry out under-graduate or graduate education, in order to not create parallel structures. External education and professional training courses are possible to run under the auspices of the Centre. In the short term the WaterCentre@KTH gives lower priority to this due to limited capacity and the fact that such “commissioned education” is still in its infancy at KTH. However, KTH is gearing up its capacity and ambitions for commissioned education under the banner call of “Lifelong Learning”. Therefore external education and development of courses for professionals should be reconsidered regularly, in particular if Partners express demand for such courses in the area of water management and technology.

The Centre’s main activities lie in collaborative research and innovation which in an indirect way also benefit the higher education at KTH. Through a raised profile of water research and visibility among KTH recruitment base of college students, we make KTH attractive as a university that provides relevant water knowledge and solutions. Cutting edge research empowers our teachers and rises the quality and impact of the education we provide. We also contribute to the quality of education through occasionally helping course developers to find lecturers from KTH and from our partners. We also involve PhD students in our activities and networking as they are an important human resource and drive much of the research at KTH. When suitable, we try to include new doctoral student positions in projects that the centre develops, in close collaboration with senior staff at respective departments who take on the supervisory role.

3 Operational aspects

Below follows an account of operational details for how we deliver our offer to Communicate, Connect and Campaign.

3.1 Communicate

The purpose of the Centre's communication platform is to easily make relevant information available to KTH researchers, other researchers and industry as well as the general public. The Centre uses its strategically chosen communication tools to spread information and communicate results, mainly from KTH researchers but also from partners or other external actors within the water sector. The collaboration with both KTH internal and external communication networks, as well as those of partners, is vital for collecting and communicating information.

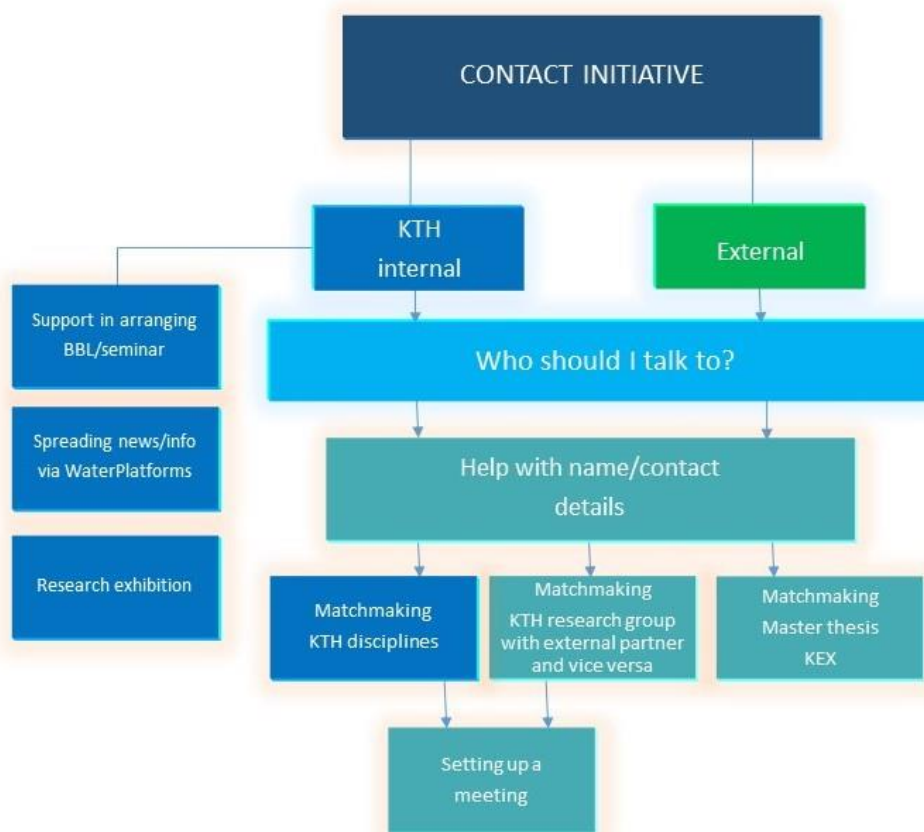
Specific communication efforts are made for larger events or campaigns. Our main communication tools:

- WaterWeb including Expert Portal, <https://www.kth.se/water>
- WaterNews - newsletter with occasional "Feature article" highlighting KTH researchers, possibly in collaboration with Södertörn Högskola, <https://www.kth.se/water/waternews-newsletter-1.894845>
- WaterBlog, <https://www.kth.se/blogs/water/>
- LinkedIn, <https://www.linkedin.com/school/watercentre-kth/?viewAsMember=true>
- Exhibition(s) showcasing water research at KTH, as part of a campaign or other focus area.

3.2 Connect

The Centre serves as a facilitator to connect people in mainly two ways. One is to support KTH researchers who want to hold seminars/Brown Bag Lunch or showcase their work through our other communication channels, or who is looking for a development partner in society. The other is to connect people who is looking for a certain competence with someone else having that competence; this can be e.g. questions from the general public, researchers looking for suitable project partners or a private or public organisation in need of a solution. Here is also included the Centre's work with connecting partners with students for master theses assignments.

These services are condensed into an offer of facilitation that is continuously communicated via the web, newsletter and at meetings. The support of the KTH central communication as well as the communication officers at each school, is important in finding and reaching even more water researchers in all of KTH.



3.3 Campaign

The WaterCentre@KTH has a proven track record in delivering externally funded and interdisciplinary research projects. In the current period we have strengthened our project development approach in order to use our resources more efficiently and to factor in that building strong interdisciplinary coalitions with partners can take time.

The WaterCentre@KTH now works through thematic Campaigns, running for 6-18 months, where we mobilize a diverse set of actors around complex and pressing water challenges, with the view to mobilise external project financing. Here we take a more ambitious and proactive role than when we Communicate and Connect. The Centre will work with one or two Campaigns at a time in a slightly overlapping fashion (see below). During a Campaign, also the communication activities will be more focused on the selected topic.

Topics for Campaigns can be proposed by virtually anyone involved in the Centre, e.g. researchers, Partners, Cluster Leaders, Board Members, etc, and is collected continuously. The Board approves Campaigns through the Annual workplan presented by the Director. Important criteria to consider when selecting themes for Campaigns:

- Relevance for the global goals for sustainability (SDGs)
- Demand from partners
- Expertise available at KTH
- Relevant for at least two schools at KTH
- Good prospect for financing
- Comparative advantage, e.g. established networks and track record

